

## Sinonasal Non-Intestinal-Type Adenocarcinoma: A Case Report

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### Abstract

We report here a 54 year male who presented with a complaint of left sided epistaxis for 5 days & a swelling on the hard palate for 8 years. CECT scan revealed a soft tissue lesion involving the hard palate and extending into the left maxillary sinus as well as both nasal cavities. Direct nasal endoscopic biopsy initially suggested an adenocarcinoma not otherwise specified. Immunohistochemistry delineated it as low-grade non-intestinal-type, which occur very uncommonly in the sinonasal region.

**Keywords:** CECT scan, soft tissue, hard palate, Immunohistochemistry, Adenocarcinoma.

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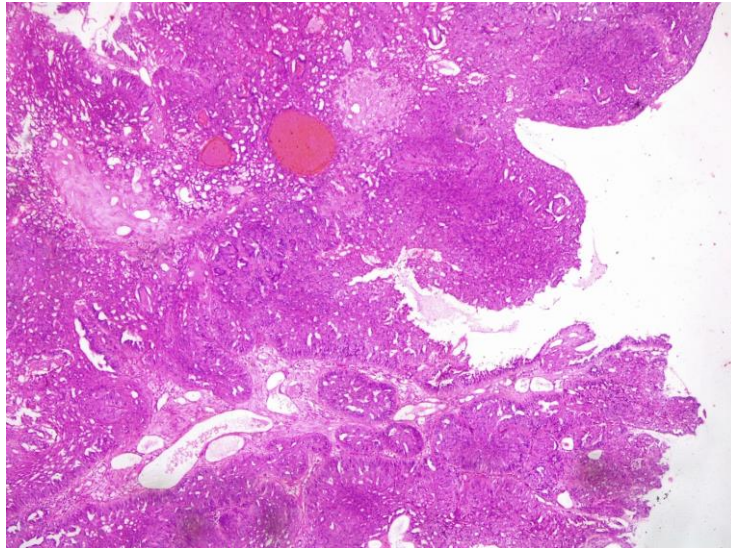
### INTRODUCTION

Tumours of the nasal cavity and paranasal cavity encompass carcinomas, teratocarcinomas, sinonasal papillomas, respiratory epithelial lesions, salivary gland tumors, soft tissue tumours, hematomatous tumors, neuroectodermal/melanocytic tumors and other tumors (such as meningiomas, ameloblastomas, hamartomas). Carcinomas include various squamous cell carcinomas, adenocarcinomas, neuroendocrine carcinomas and various poorly differentiated or undifferentiated carcinomas. Adenocarcinomas of the sinonasal or nasal tract can be of the intestinal or non-intestinal type. Furthermore, non-intestinal adenocarcinomas can be categorized into low grade and high grade carcinomas. Non-intestinal adenocarcinomas are very uncommon in the sinonasal region sinonasal region [1].

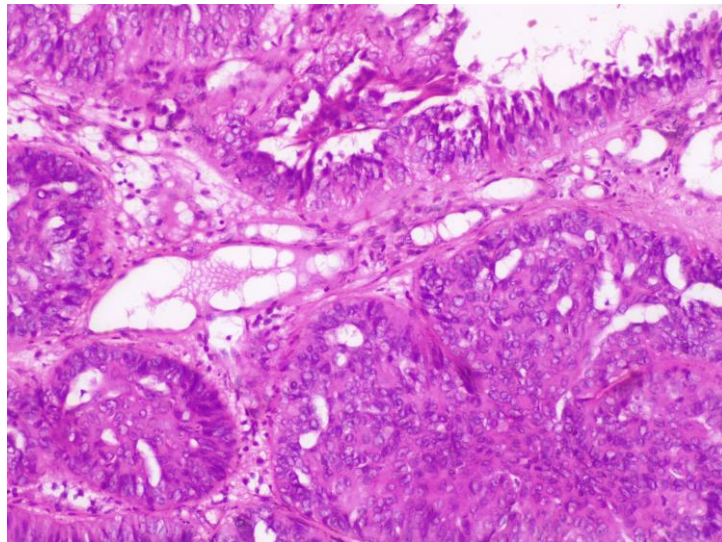
### CASE REPORT

A 54 year male presented with a complaint of left sided epistaxis for 5 days & a swelling on the hard palate for 8 years. He has no other chronic diseases.

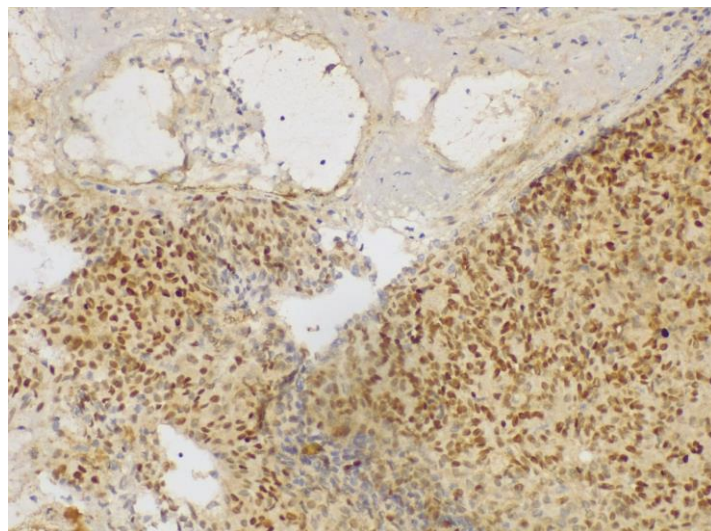
Moreover, he has no history of smoking, tobacco chewing or alcoholism. On clinical examination, a smooth bulge was present on the floor of bilateral nasal cavity and hard palate. CECT scan showed an evidence of tissue density lesion with areas of central necrosis involving hard palate and extending into the left maxillary cavity and bilateral nasal cavities. A biopsy was taken via direct nasal endoscopy which revealed a neoplasm composed of cells in glandular/tubular, papillary and cribriform pattern with little intervening stroma. Individual tumour cells were columnar/cuboidal with moderate eosinophilic cytoplasm and oval vesicular nuclei. Mitosis was 2/10 hpf. No necrosis, intracytoplasmic mucin, mucin pools or calcifications were seen. Thus, histopathology suggested an adenocarcinoma not otherwise specified. Immunohistochemistry with markers CK7, S100, p63, CEA, Ki67, CK20, CDX2 and MUC2 was performed. CK7 was positive, Ki67 was low, while other markers were negative and accordingly, a diagnosis of low grade sinonasal non-intestinal-type adenocarcinoma was made.



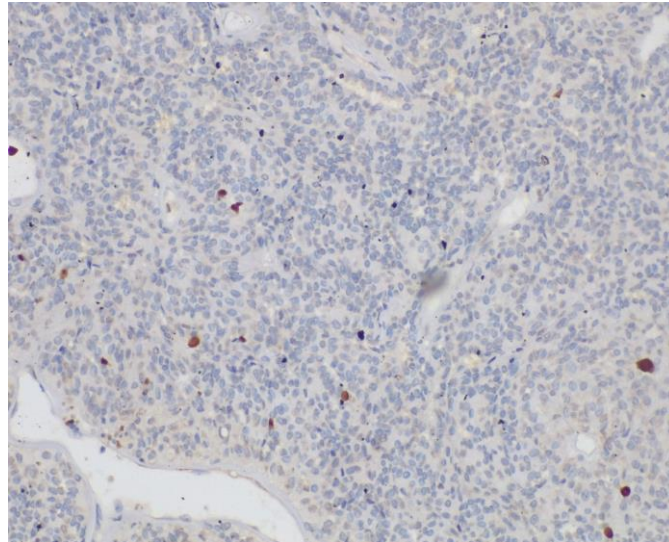
**Figure 1: Sinonasal Adenocarcinoma NOS (magnification 4X)**



**Figure 2: Sinonasal Adenocarcinoma NOS (magnification 40X)**



**Figure 3: CK7 Positive (magnification 10X)**



**Figure 4: Ki67 shows low proliferation (magnification 10X)**

## DISCUSSION

Malignant tumours of sinonasal tract constitute less than 1% of all malignancies in the body and about 3% of head and neck cancers [2]. Adenocarcinomas comprise 10% to 20% of all primary malignant neoplasms of the nasal cavity and paranasal sinuses, and these malignancies can be salivary-type adenocarcinomas or non-salivary-type adenocarcinomas [3, 4]. Among the latter, non-intestinal-type adenocarcinomas are classified into low- and high-grade types, the latter being even more rarer than the former. There is no known etiology for low and most high grade tumors, except for an association of HPV and sinonasal papilloma with rare high grade tumors. Most low grade tumors affect the nasal cavities more than the sinuses. Histopathologically, high-grade non-intestinal-type carcinomas have been reported to display a diversity of morphologic patterns such as blastomatous, apocrine, oncocytic/mucinous, poorly differentiated/undifferentiated, and others [5]. Their nuclei tend to be pleomorphic and there is mitotic activity. Meanwhile, histopathologically, low-grade non-intestinal-type carcinomas exhibit varied architectural forms with exophytic papillae and tubular or glandular patterns. Trabecular, cribriform, clear cell and mucinous patterns have also been reported [6-8]. The most important differential diagnosis of low-grade non-intestinal-type sinonasal adenocarcinoma is intestinal-type sinonasal adenocarcinoma. In accordance with colonic adenocarcinomas, intestinal-type sinonasal adenocarcinomas not only stain positive for CK20, CDX-2 and MUC2, but also, in contrast to colonic adenocarcinomas, stain positive for CK7. Intestinal-type sinonasal adenocarcinomas often stain for chromogranin while staining for CEA is variable. However, so far the differentiation of primary sinonasal tumors of the intestinal-type from the rare possibility of a metastatic lesion using immunohistochemical markers or morphologic features remains uncertain. In contrast, non-intestinal-type sinonasal adenocarcinomas have

been reported to lack intestine-specific immunophenotypic markers such as CDX-2, MUC-2, and CK20. Due to positivity for markers of seromucinous differentiation such as DOG1, SOX10, and S-100, a subset of these carcinomas was termed as sinonasal seromucinous adenocarcinoma. Another subset is composed predominantly of clear cells, mimicking renal cell carcinoma. These renal cell-like carcinomas express CAIX and CD10 but not PAX8 or renal cell carcinoma marker. The treatment of low-grade sinonasal adenocarcinoma is usually a complete surgical excision. Although local recurrences are possible, metastasis is unusual and the overall prognosis is favourable. However, the high-grade non-intestinal-type adenocarcinomas fare much worse than the low grade types [1].

**Conflict of Interest:** The authors declare no conflict of interest.

## ACKNOWLEDGEMENT

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